IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Anthonius A. J. DE GRAAFF et al.

Application No.: 10/607.057   Confirmation No.: 4155

Filed: June 27, 2003   Art Unit: 2625

For: IMAGE SCANNING AND PROCESSING   Examiner: J. X. Zheng
SYSTEM, METHOD OF SCANNING AND
PROCESSING AN IMAGE AND METHOD
OF SELECTING ONE OF A PLURALITY OF
MASTER FILES COMPRISING DATA
ENCODING A SCANNED IMAGE

APPEAL BRIEF ON BEHALF OF APPELLANT UNDER 37 C.F.R. § 41.37

MS APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

INTRODUCTORY COMMENTS

This is an Appeal from the final Office Action of March 5, 2009, rejecting claims 1-18 in the above-identified application. The appealed claims are claims 1-18, and are set forth in the attached Appendix.

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I. REAL PARTY IN INTEREST

The instant application is assigned to OCÉ-TECHNOLOGIES B.V., as recorded on June 27, 2003, at Reel/Frame 014247/0032. No further assignments of this application have been made.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for the instant application.

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III. STATUS OF THE CLAIMS

Claims 1-18 are currently rejected and appealed, and are set forth in the attached Appendix.

IV. STATUS OF AMENDMENTS

An Amendment has been filed on June 5, 2009, subsequent to the final Office Action of March 5, 2009. However, the Examiner in the Advisory Action dated June 22, 2009 indicated that the Amendment of June 5, 2009 was not entered, on the grounds that the amendments to claims 1, 6 and 17 and new claims 19-21 raise new issue, which would require further consideration and/or search.

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V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claims 1-5 and 18

Independent claim 1 and its dependent claims relate to an image scanning and processing system (see FIG. 1, not labeled), comprising:

a scanner (e.g., 1 in FIG. 1 and 2 in FIG. 2) configured to generate a stream of data (not labeled; see paragraph [035]) encoding a scanned image (not labeled; see paragraph [035] and step S12 in FIG. 5), as illustrated in paragraphs [027], [028], [031], [034] and [035];

a controller (e.g., 10 in FIG. 1) configured to control and process data (not labeled; see paragraph [035]) received from the scanner (e.g., 1 in FIG. 1 and 2 in FIG. 2) , as illustrated in paragraphs [027], [032] and [035]; and

a file storage device (e.g. 13 in FIG. 1) configured to store a master file (not labeled; see paragraph [038]) including data from the stream of data (not labeled; see paragraph [035]), as illustrated in paragraphs [027], [037] and [038],

wherein the controller (e.g., 10 in FIG. 1) is configured to create a preview image (not labeled; see paragraph [035]) with a lower data size than the scanned image (not labeled; see paragraph [035]) from at least part of the data encoding the scanned image (not labeled; see paragraph [035]), as illustrated in paragraph [035],

wherein the controller (e.g., 10 in FIG. 1) is further configured to extract data (not labeled; see paragraph [036]) encoding the preview image (not labeled; see paragraph [035]) directly from the stream of data (not labeled; see paragraph [035]), as illustrated in paragraph [036], and to write the extracted data (not labeled; see paragraph [036]) to a thumbnail file (not

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labeled; see paragraph [037]) in order to create the preview image (not labeled; see paragraph [035]), as illustrated in paragraph [037].

Claims 6-16

Independent claim 6 and its dependent claims relate to a method of scanning and processing an image (see FIG. 5 and paragraph [035]), comprising:

scanning an original (not labeled; see paragraph [0034]) and thereby generating a stream of data (not labeled; see paragraph [035]), as illustrated in the step S12 in FIG. 5 and paragraphs [034] and [035];

encoding a scanned image (not labeled; see paragraph [035]), as illustrated in paragraph [035];

saving the scanned image (not labeled; see paragraph [035]) in a master file (not labeled; see paragraph [038]), as illustrated in paragraph [038]; and

creating a preview image (not labeled; see paragraph [035]) with a lower data size than the scanned image (not labeled; see paragraph [035]) from at least part of the data encoding the scanned image (not labeled; see paragraph [035]), as illustrated in paragraph [035],

wherein data encoding the preview image (not labeled; see paragraph [035]) is extracted directly from the stream of data (not labeled; see paragraph [035]), and written to a thumbnail file (not labeled; see paragraph [037]) in order to create the preview image (not labeled; see paragraph [035]), as illustrated in paragraphs [036] and [037].

Claim 17

Independent claim 17 relates to a method for selecting one of a plurality of master files (not labeled; see paragraphs [038] and [067]) comprising data encoding at least one scanned image (see paragraph [067]), wherein the master file (not labeled; see paragraph [038]) is created by scanning an original (not labeled; see paragraph [0034]) and thereby generating a stream of data (not labeled; see paragraph [035]), . as illustrated in the step S12 in FIG. 5 and paragraphs [034] and [035], encoding a scanned image (not labeled; see paragraph [035]), as illustrated in paragraph [035], and saving the scanned image in a master file (not labeled; see paragraph [038]), as illustrated in paragraph [038], the method comprising:

providing at least part of a thumbnail file (not labeled; see paragraph [037]) associated with one of the master files (not labeled; see paragraphs [038] and [067]) to an archive manager (e.g., 38 in FIG. 1), as illustrated in paragraph [067], said part of the thumbnail file (not labeled; see paragraph [037]) including data encoding a preview image (not labeled; see paragraph [035]) corresponding to the scanned image (not labeled; see paragraph [035]) with a lower data size than the scanned image (not labeled; see paragraph [035]), as illustrated in paragraph [035], whereby the archive manager (e.g., 38 in FIG. 1) can display the parts as survey previews (not labeled; see paragraph [067]) to the user for selection, as illustrated in paragraph [067],

wherein data encoding the preview image (not labeled; see paragraph [035]) is extracted directly from the stream of data (not labeled; see paragraph [035]), and written to a thumbnail file (not labeled; see paragraph [037]) in order to create the preview image (not labeled; see paragraph [035]), as illustrated in paragraphs [036] and [037].

VI. GROUNDS OF REJECTION

Claims 1-18 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

Claims 1, 2, 6-10, 15 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby, EP 0589724 (hereinafter "Searby"), in view of Liu, U.S. Patent No. 7,302,118 (hereinafter "Liu").

Claims 3, 11 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby in view Liu, and further in view of Patton, U.S. Patent 6,795,209.

Claims 4 and 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby in view of Liu, and further in view of Zhou, U.S. Patent Application Publication No. 2002/0015447.

Claims 5 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby in view of Liu, and further in view of Baggs U.S. Patent Application Publication No. 2003/0231801.

VII. APPELLANT'S ARGUMENTS

1. Rejection under 35 U.S.C. § 112, second paragraph

Claims 1-18

The Examiner alleged that the recitation "the controller is further configured to extract data encoding the preview image directly from the stream of data, and to write the extracted data to a thumbnail file in order to create the preview image" as recited in claim 1, "data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file in order to create the preview image" as recited in claim 6, and "the data encoding the preview image is extracted directly from the stream of data and is written to a thumbnail file in order to create the preview image" as recited in claim 17 are not clear and definite due to the term "directly" as recited in claims 1, 6 and 17. Appellants respectfully submit that the term "directly" simply means that the data encoding the preview image is extracted from the stream of data on the fly (i.e., directly extracted from the stream of data), and is then written as a thumbnail file, thereby creating the preview image. See paragraph [036] of the specification as originally filed. Therefore, it is believed that independent claims 1, 6 and 17 and their dependent claims are clear and definite.

2. Rejection under 35 U.S.C. § 103(a) over Searby in view of Liu

Claims 1, 6 and 21

Independent claim 1 recites a combination of elements including "the controller is further configured to extract data encoding the preview image directly from the stream of data, and to write the extracted data to a thumbnail file in order to create the preview image."

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Independent claim 6 recites a combination of elements including "data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file in order to create the preview image."

Independent claim 17 recites a combination of elements including "the data encoding the preview image is extracted directly from the stream of data and is written to a thumbnail file in order to create the preview image."

Appellants respectfully submit that the above combinations of elements as set forth in independent claims 1, 6 and 17 are not disclosed nor suggested by the references relied on by the Examiner.

As embodied in paragraphs [035]-[036] of the specification as originally filed, the data encoding the original scanned image is passed in a stream from the scanner 1 to the controller 10. The controller then scales down the data of the original scanned image *when the data of the original scanned image arrives at the controller 10* so as to generate a preview image on the fly (see paragraph [036]). The scaled-down data is then sent by the controller 10 to the storage means 13 as a thumbnail file (see paragraph [037]). The data encoding the original scanned image is also sent by the controller 10 to the storage means 13(see paragraph [038]).

In other words, in the present invention, the extracted data from the data encoding the original scanned image is *not extracted after* the data encoding the original scanned image is stored in the storage means. Instead, the extracted data is extracted *when the data of the original scanned image arrives at the controller*; i.e., the extracted data is directly extracted from the data encoding the original scanned image on the fly. *After* the data is extracted, the extracted data is written to a thumbnail file, thereby *creating the preview image.*

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The Examiner has correctly acknowledged that Searby fails to teach extracting data encoding the preview image from the stream of data as recited in claims 1, 6 and 17. Therefore, it is believed that Searby also fails to teach "the controller is further configured to extract data encoding the preview image directly from the stream of data, and to write the extracted data to a thumbnail file in order to create the preview image" as recited in claim 1, "data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file in order to create the preview image" as recited in claim 6, and "the data encoding the preview image is extracted directly from the stream of data and is written to a thumbnail file in order to create the preview image" as recited in claim 17.

Liu fails to cure the deficiencies of Searby. In particular, Liu describes a method for transforming a digital image including a main image and associated metadata in accordance with a parameter. Liu's method includes checking a compression tag contained in the metadata of the digital image, wherein the digital image is obtained from a file stored in the Exchangeable Image File ("EXIF") format, to determine whether a thumbnail image contained in the metadata of the digital image is in a compressed JPEG format.

However, Liu does not disclose or suggest directly extracting data encoding the preview image from the stream of data on the fly. More specifically, the EXIF stream 220 of Liu contains at least one digital image in the format illustrated in Fig. 2, having a main image 204, simple metadata 206 and complex metadata 208, such as a thumbnail image or audio data. In other words, the thumbnail image in the EXIF stream 220 of Liu *has already been created* when the EXIF stream 220 is formed. Therefore, the thumbnail image in Liu *has been created before it can be extracted from the EXIF stream 220*. Unlike Liu's teaching that the thumbnail image

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pre-exists before it can be extracted, the thumbnail file in the claimed invention is *created* by directly extracting the stream of data on the fly. Accordingly, Liu fails to teach "the controller is further configured to extract data encoding the preview image directly from the stream of data, and to write the extracted data to a thumbnail file in order to create the preview image" as recited in claim 1, "data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file in order to create the preview image" as recited in claim 6, and "the data encoding the preview image is extracted directly from the stream of data and is written to a thumbnail file in order to create the preview image" as recited in claim 17.

Appellants respectfully submit that the present invention is directed towards a scanner generating a stream of data that is processed in *two ways*: one is storing the data in a master file, and the other is extracting from the stream of data preview image encoding data. The preview image encoding data, which is also described as extracted data, is written to a thumbnail file. These features are clearly absent from the utilized references because they at best disclose using a scanner to generate a stream of data that is stored in a master file, from which data is read and used to generate a preview image. This does not have the advantages of the scanner of the present invention of showing the preview image during the scanning of the document.

With regard to the Examiner's reliance on the secondary references, these references have only been relied on for their teachings against some dependent claims. These references also fail to disclose the above combinations of elements and steps as set forth in amended independent claims 1, 6 and 17. Accordingly, these references fail to cure the deficiencies of Searby.

Accordingly, none of the utilized references individually or in combination teach or suggest the limitations of amended independent claims 1, 6 and 17. Therefore, Appellants

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respectfully submit that amended independent claims 1, 6 and 17 clearly define over the teachings of the utilized references.

Dependent Claims 2, 7-10 and 15

Claims 2, 7-10 and 15 depend, either directly or indirectly, from independent claims 1 and 6, and are therefore allowable based on their respective dependence from independent claims 1 and 6, which are believed to be allowable.

3. Rejection under 35 U.S.C. § 103(a) over Searby in view of Liu and Patton

Dependent Claims 3, 11 and 18

Claims 3, 11 and 18 depend, either directly or indirectly, from independent claims 1 and 6, and are therefore allowable based on their respective dependence from independent claims 1 and 6, which are believed to be allowable.

4. Rejection under 35 U.S.C. § 103(a) over Searby in view of Liu and Zhou

Dependent Claims 4 and 12-14

Claims 4 and 12-14 depend, either directly or indirectly, from independent claims 1 and 6, and are therefore allowable based on their respective dependence from independent claims 1 and 6, which are believed to be allowable.

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5. Rejection under 35 U.S.C. § 103(a) over Searby in view of Liu and Baggs

Dependent Claims 5 and 16

Claims 5 and 16 depend, either directly or indirectly, from independent claims 1 and 6, and are therefore allowable based on their respective dependence from independent claims 1 and 6, which are believed to be allowable.

In view of the above remarks, Appellants respectfully submit that claims 1-18 clearly define the present invention over the references relied on by the Examiner.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

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Respectfully submitted,

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Attachments: Claims Appendix
Evidence Appendix
Related Proceedings Appendix

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VIII. CLAIMS APPENDIX

1. (Previously Presented) An image scanning and processing system, comprising:

a scanner configured to generate a stream of data encoding a scanned image;

a controller configured to control and process data received from the scanner; and

a file storage device configured to store a master file including data from the stream of data,

wherein the controller is configured to create a preview image with a lower data size than the scanned image from at least part of the data encoding the scanned image, wherein the controller is further configured to extract data encoding the preview image directly from the stream of data, and to write the extracted data to a thumbnail file in order to create the preview image.

2. (Previously Presented) The system according to claim 1, further comprising:

a display unit configured to display at least a portion of the preview image and to display a detailed view of a section of the displayed preview image according to a user's selection of the section.

3. (Previously Presented) The system according to claim 2, wherein the display unit is configured to provide a selection frame with which the user makes the user's selection of the section, the selection frame being resizable and movable.

4. (Previously Presented) The system according to claim 2, wherein the controller is configured to convert the selected section of the preview image to a different data format before being displayed.

5. (Previously Presented) The system according to claim 1, wherein the scanner or the controller is configured to check the scanned image for artifacts, and to store information specifying the detected artifacts with the preview image in the file storage device.

6. (Previously Presented) A method of scanning and processing an image, comprising:

scanning an original and thereby generating a stream of data;

encoding a scanned image;

saving the scanned image in a master file; and

creating a preview image with a lower data size than the scanned image from at least part of the data encoding the scanned image,

wherein data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file in order to create the preview image.

7. (Original) The method according to claim 6, wherein the preview image is a lower resolution rendition of at least part of the scanned image.

8. (Original) The method according to claim 6, wherein at least part of the preview image is displayed to an operator as a survey view in a window on a display.

9. (Original) The method according to claim 8, wherein the part of the preview image is displayed before or during the saving to the thumbnail file.

10. (Original) The method according to claim 6, wherein part of the scanned image representing a region of interest is displayed to an operator as a detailed view of the region of interest in a window on a display.

11. (Original) The method according to claim 8, further comprising:

providing a selection frame in the survey view, wherein an operator selects a region of interest by sizing and positioning the selection frame in the survey view.

12. (Original) The method according to claim 10, wherein the part of the scanned image representing the region of interest is converted to a different data format before being displayed.

13. (Original) The method according to claim 12, wherein the part of the scanned image representing the region of interest is compressed when converted to the different data format and decompressed before being displayed.

14. (Original) The method according to claim 13, wherein the part of the scanned image representing the region of interest is chosen to be larger than a size leading to compression artifacts.

15. (Original) The method according to claim 6, further comprising:

image-processing the stream of data before creation of the preview image.

16. (Original) The method according to claim 6, wherein the scanned image is checked for artifacts, and wherein information specifying the detected artifacts is provided with the preview image.

17. (Previously Presented) A method for selecting one of a plurality of master files comprising data encoding at least one scanned image, wherein the master file is created by scanning an original and thereby generating a stream of data, encoding a scanned image, and saving the scanned image in a master file, the method comprising:

providing at least part of a thumbnail file associated with one of the master files to an archive manager, said part of the thumbnail file including data encoding a preview image corresponding to the scanned image with a lower data size than the scanned image, whereby the archive manager can display the parts as survey previews to the user for selection,

wherein the data encoding the preview image is extracted directly from the stream of data and is written to a thumbnail file in order to create the preview image.

18. (Previously Presented) The system according to claim 1, further comprising:

an inkjet printing device configured to print the preview image and/or the scanned image.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None